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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/042,063	10/18/2001	Tadashi Nishiyama	SIW-017	3885

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LAHIVE & COCKFIELD, LLP.
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BOSTON, MA 02109

EXAMINER

DOVE, TRACY MAE

ART UNIT PAPER NUMBER

1745

DATE MAILED: 01/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/042,063

Applicant(s)

NISHIYAMA ET AL.

Examiner

Tracy Dove

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☒ Claim(s) 2-5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 . 6) ☐ Other: _____

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DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 10/18/01 has been considered by the examiner.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites "at least one of a coolant supply and drainage passage, and a gas supply and exhaust passage", which is unclear. The coolant supply passages (18) are not the same as the coolant drainage passages (19). Furthermore, the gas supply passages (14,15) are not the same as the gas exhaust passages (16,17). Therefore, the group from which "at least one" is selected from is indefinite. Examiner suggests amending the claim to recite "at least one of coolant supply and drainage passages or gas supply and exhaust passages".

Claims 3 and 4 both recite "an engaging portion" to refer to two separate parts of the fuel cell stack. Examiner suggests that claims be amended to recite "wherein the grommet has a first

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engaging portion which is detachably engaged with a second engaging portion formed at said edge of each passage through the power output terminal plates.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Kralick, US 6,426,159

B1.

Kralick teaches a fuel cell stack comprising a stack of flow plates, a first gasket that is compatible with a coolant and a second gasket that is incompatible with the coolant. The stack of flow plates includes openings to form a coolant passageway that communicates a coolant and a reactant manifold passageway. The first gasket forms a seal around the coolant manifold passageway between an adjacent pair of plates and the second gasket forms a seal around the reactant manifold passageway between the adjacent pair of plates (col. 2, lines 28-37). The first and/or second gasket may reside in an associated gasket groove (engaging portion) that is formed in the surface of one of the adjacent plates (col. 4, lines 66-col. 5, lines 4). The fuel cell stack includes a plurality of fuel cell modules comprising an anode-membrane-cathode assembly (MEA) separated by bipolar plates/cooler plates (terminal plates) (col. 2, lines 1-25).

Thus the claims are anticipated.

Allowable Subject Matter

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Claims 2-5 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the claims are directed toward a fuel cell stack comprising a pair of power output terminal plates with coolant or gas supply passages. An edge of each passage of the plates is covered with a grommet having an insulating capability. The grommet includes a seal lip or an engaging portion which is detachably engaged with the edge of each passage. Alternatively, the grommet attached to one of the terminal plates has no hole and is closed.

The prior art (Kralick) does not teach a grommet including a seal lip or an engaging portion which is detachably engaged with the edge of each passage. The prior art does not teach the grommet attached to one of the terminal plates has no hole and is closed.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Marianowski 5,342,706 teaches an internally manifolded fuel cell stack.

Ohara 6,444,346 teaches a fuel cell stack with gas and coolant flow passages.

Bruckner 6,638,656 teaches a fuel cell having edges of the membrane and edges of the terminal plates fitted into one another.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tracy Dove whose telephone number is (703) 308-8821. The Examiner may normally be reached Monday-Thursday (9:00 AM-7:30 PM). My supervisor is

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Pat Ryan, who can be reached at (703) 308-2383. The Art Unit receptionist can be reached at (703) 308-0661 and the official fax numbers are 703-872-9310 (after non-final) and 703-872-9311 (after final).

A handwritten signature in black ink, appearing to read "Tracy Dove", written in a cursive style.

Tracy Dove
Patent Examiner
Technology Center 1700
Art Unit 1745

January 9, 2004